



STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
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4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

November 23, 1982

Mr. Lloyd L. Wall
Kolt Mining Company
942 East 7145 South, Suite 105
Midvale, Utah 84047

RE: Kolt Mining Company
Milford Project
ACT/001/006
Beaver County, Utah

Dear Mr. Wall:

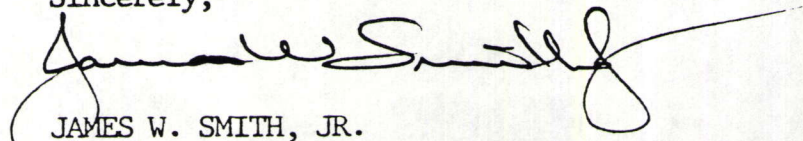
The Division of Oil, Gas and Mining has made a preliminary review of the Milford Project to determine compliance with Rule M-3 of the Utah Mined Land Reclamation Act of 1975, Title 40-8, Utah Code Annotated 1953.

This letter is to inform you of some of the deficiencies found in our preliminary review of your mine plan. A more substantive review, which will include the hydrology, will be accomplished after our on-site inspection of the minesite in December. Hopefully this on-site inspection will answer most of our questions and we will be able to get back to you with our final comments within two weeks following our visit.

One major item which the mine plan lacks is a completed MR-1 Form. A copy has been enclosed along with the remainder of our comments.

If you have any questions, please contact me or Cy Young of my staff.

Sincerely,


JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/CY:btb

Enclosure

cc: BLM, Cedar City

REVIEW COMMENTS

KOLT MINING COMPANY
Milford Project
ACT/001/006, Beaver County, Utah

Rule M-3(1)

The applicant should include a map of approximately the same scale as Map 2.2-1 and include on it a more detailed conceptualization of the proposed pit area and millsite. The Division would be better able to review the location of the mine facilities in terms of their relative placement to drainages and roads. Also included should be the boundaries of the area to be disturbed, including both the pit and the millsite.

The plan makes reference to Map 2.3-2, a Mine Drainage and Disturbance Map, but the map is not included in the mine plan. Please provide a copy of this map.

Rule M-3(1)(g)

Please show the location of the sanitary waste fill on a map.

Please delineate on a map all areas of previous disturbance, all areas which will and will not be reclaimed and superimpose all mine facilities or structures on this map.

A more specific soils map would be a great asset in planning a topsoil management program. A map should be provided which relates soil series and/or complex and available soil depth to soils to be salvaged. The applicant should relate the location of surface facilities and areas to be disturbed to this map. Please indicate the location of all sample points taken for each soil series on this map.

Rule M-3(2)(e)

It is not clear how the seed mixes and planting lists "have been assembled with respect to the species (kinds and amounts) which occurred prior to mining" (MRP, page 243) when many of the major components of the potential native plant community (page 2-13) do not appear on any of the six revegetation seed mixes. These species include blue grama, Nevada bluegrass, big sagebrush and bitterbrush. There is also no indication that the saltbushes included in some of the seed lists will flourish, since they are not a part of the native community. Saltbushes require particular soil characteristics to grow and those do not appear to be present. Applicant should revise his seed mixes to reintroduce more of the native plant community into the site, as well as to provide for quick cover establishment and erosion control.

The pounds per acre in seed mixes #1, 2 and 5 do not add up to 18-1/2 as stated.

Alfalfa will be inoculated with what (page 2-45)? Will reclaimed areas need to be protected from grazing by domestic and/or wild animals? If so, what methods will be used?

Rule M-10(2)(e)

What is meant by "highwalls" in the pit? Is the 1:1 slope previously referred to or is it vertical face (page 2-57)? What is proposed for protection of the public with regard to highwalls.

The applicant has not formally requested a variance to this part, rather, simply states this as a procedure.

Rule M-10(6)

The applicant alludes to the presence of trace minerals on page 2-42 with reference to the use of shallow rooted species to avoid "pumping" of such materials. What is the chemical nature of the overburden?

Will waste rock/overburden generated in this operation be analyzed for toxicity to assure safety in surface disposal? This waste rock has been slated for haulroads, millsite foundations and dam embankment material. What tests will be performed?

Rule M-10(7)

The applicant states on page 2-46 that foundations will not be broken up. This is not approvable. The site as a whole should be rendered to a state capable of supporting revegetation. Please address handling or disposal of broken concrete.

Rule M-10(12)

What is the "appropriate" seed mix on the "outboard surface" of the dam? Additional details on fertilizer usage in test plots is needed.

Rule M-10(12)(2)(a)

A specific revegetation success standard must be determined. Cover values given in Table 2.2-3 should be correlated with the various seed mixes proposed for revegetation. Since it appears that the majority of the area disturbed will be pinyon-juniper habitat, one success standard would probably be acceptable. However, unless pinyon-juniper will be replanted, it is unlikely that 55 percent vegetation cover can be reestablished. A success standard of 15-20 percent is probably achievable.

Table 2.2-3 is not clear. Percentages of vegetative cover, litter, rock and bareground should add up to 100 percent, but they do not in any of the columns. Please revise.

Rule M-10(12)(2)(b)

Monitoring of revegetated areas during the bond release period should be discussed. This includes monitoring methods, timing and duration of monitoring and method of determining whether or not the success standard has been achieved. Funds for a minimum of three years of monitoring should be included in surety calculations.

Rule M-10(12)(3)

The applicant indicates that test plots will be established. Specific species to be seeded, seeding rates (PLS/acre), seedbed preparation, planting techniques and kinds and amounts of mulch and fertilizer should be submitted to the Division at least 60 days prior to implementation.

How will test plot success be monitored? Will test plots be used to determine species selection as well as fertilization techniques? Will test plots for both overburden and topsoil be set up?

A specific schedule for and description of the various components of the wildlife monitoring plan should be submitted to the Division.

Map 2.2-6 as referenced on page 2-18 was not included in the plan.

Soil Removal

Rule M-10(14)
M-3(1)(f)

The permit application is lacking in that insufficient information is provided to allow for the development of criteria for topsoil and subsoil salvage operations as well as volumes required to effect reclamation. The applicant makes statements on page 2-39 such as "soils suitable for reclamation" but has advanced no criteria for making such a determination. This concern is amplified by statements such as "should areas go wanting for topsoil." Approximate volumes required for reclamation and anticipated retrievable volume should be ascertained in advance. (Please refer to the enclosed soil tabulation chart.)

Soil data provided in the application are inadequate as a base to make logical planning designs. For example, the applicant indicates on page 2-38 that soils present in the "waste rock dump area" will not support vegetation and implies that this material will not be salvaged. This must be documented by providing soil chemical analysis. Please provide more baseline soils data. Data should include, but not be limited to, soil texture, pH,

electrical conductivity, sodium absorbtion ratio, boron, iron, lead, molybdenum, selenium, zinc, available nitrigen, phosphorous and potassium, soluble calcium, magnesium and sodium. Sampling should be performed by depth. This information will assist in formulating plans for proper handling of soil materials.

Further, it does not necessarily follow that areas such as waste rock dump area (page 2-38) should not have benefit of topsoil replacement. This is presumably justified by a lack of plant growth supporting material. The basis for this assumption is not readily evident. From the soils map presented, it appears that nearly 65 percent of the soils located on the permit area are Blackett Series which are described as deep with a nine inch sandy loam upper horizon. Also, the Sheeprock Series can be a source of materials especially in areas where thick zones present themselves.

On page 2-39, the applicant makes a statement "when a high potential for vegetative success is observed on dump material." What is the nature of the material in question? What reason is there to believe it will or will not be useful? Please clarify.

Also, on page 2-39, the applicant indicates that subsoil will not be removed from the tailings pond area. Please provide rationale for this including physical and chemical analysis as described above.

Soil Protection: What measures will be employed to achieve adequate topsoil stockpile protection? Will drainage be diverted away from piles? Will berms be used to retain soil? Will terraces be employed on soil stockpiles? Will mulching be utilized or will other surface stabilizing agents or meaures be used? Will seed be covered with soil?

Please provide a discussion regarding the specifics of preventing "traffic" on soil stockpiles during their storage life. Also, please provide a map depicting all topsoil storage locations as well as volumes of soil in each location. Please relate this to the sequence of development in such a way to assure that the soils stored in a given location will not be redisturbed prior to final reclamation.

The above-mentioned map should include details showing how drainages will be routed away from storage sites, etc. What is the anticipated final storage depth at each topsoil storage area? What will be the probable dimension of each stockpile? What will the outslopes of the stockpiles be? Will the stockpiles be conical, flat or concave?

Soil Redistribution: Please indicate all areas which will receive topsoil providing specific information as to the depth of replacement. Will the waste rock dumping area receive topsoil at the time of reclamation? The operator states that areas such as roads and diversions, topsoil will be bladed to the side and seeded. If diversions are to be left in place, this may be acceptable. However, why would soils stored adjacent to roads not be reapplied to facilitiate reclamation?

The applicant must specify season of year during which soil redistribution will occur.

Bonding

The bonding estimate should be based on the reclamation work for the entire permit area. This estimate is developed from the viewpoint of the cost to the State if the company defaulted and had to complete reclamation.

The bond estimate should be detailed. The type of work performed, amount of material removed or replaced, and equipment used are helpful for the development of the amount of surety.

The form of surety should be discussed with the Division staff.

Abandonment

It is mentioned that abandonment will be complete when the present recoverble ore has been extracted and all equipment and debris have been removed from the surface.

The proposed postmining topography should be graphically displayed by a location map as well as cross-section. More discussion will be needed regarding the reclamation of the open pit.

The foundations should be broken up and removed as prescribed in Rule M-10(9), Structures and Equipment.